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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/089,292 | 08/28/2002 | Hon Mun Ng | 8737-000010 | 9370 |
| 27572 | 7590 | 11/30/2005 | EXAMINER | |
| HARNESSE, DICKEY & PIERCE, P.L.C. | | | LI, BAO Q | |
| P.O. BOX 828 | | | ART UNIT | |
| BLOOMFIELD HILLS, MI 48303 | | | PAPER NUMBER | |
| | | | 1648 | |

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/089,292

Applicant(s)

NG ET AL.

Examiner

Bao Qun Li

Art Unit

1648

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 34-66 is/are pending in the application.
4a) Of the above claim(s) 38-44, 50-53 and 58-63 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 34-37, 45-49, 54-57 and 64-66 is/are rejected.
7) ☒ Claim(s) 54-57 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 01/17/2002 & 09/07/2005 (Abstract only)
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

This is a response to the amendment filed 09/07/05. Claims 1-33 have been canceled. New claims 34-66 have been added. Claims 34-66 are pending before the examiner.

Please note any ground of rejection(s) that has not been repeated is removed. Text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

Information Disclosure Statement

1. The information disclosure statement filed on 09/07/2005 has been acknowledged. However, it still fails to comply with 37 CFR 1.98(a)(2), which requires legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed because only abstracts have been provided. It has been placed in the application file, but the information referred to therein has not been considered.
2. The information disclosure statement filed 03/27/2003 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because lacks of copies of all listed references. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).
3. In the instant case, a copy of full document for each cited reference is required.

Claim Objections

4. Claims 54-57 are objected to because of the following informalities: Claims 54-56 and 57 depend on canceled claim 1. Because new claim 34 is the claim corresponding to the canceled claim 1. Presumably, claims 54-57 are dependent claims of claim 34. However, the correct dependency of claims 54-57 needs to be clarified in response to the current office action.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 34-37, 45-49, 54-57 and 64-66 are still rejected under 35 U.S.C. 112, first paragraph on the same ground as stated in the previous office, as failing to comply with the written description requirement. The claim(s) contains subject matter' which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a written description rejection against the claimed functional fragment or analog or combination thereof and method of using it.

7. In response to the previous office action, Applicants substitute old claim 1 with new claim 34 by adding one limitation of the isolated peptide pE2 consisting of SEQ ID NO: 2 homodimers. However, the broad scope of claims still read on some derivatives thereof having extension, substitution, insertion and/or deletion of the amino acid sequence of SEQ ID NO: 2. Because the claims do not point out the distinguished structural features of all derivatives, the claims are drawn to genus proteins that are not defined by any distinct structure characteristics or sequence identity. Therefore, the rejection is still maintained.

Claim Rejections - 35 USC § 102/103

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 34-37, 45, 47, 54-57 and 64-66 are still rejected under 35 U.S.C. 102(b) on the same ground as stated in the previous office action as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over by Reyes et al. (US Patent No. 5,686,239A).

11. In response to the previous office action, Applicants substitute old claim 1 with new claim 34 by adding one limitation of the isolated peptide consisting of pE2 homodimers and immunological reaction to the pE2 homodimers. Therefore, the cited reference does not teach or obvious to the unique characteristic of the isolated pE2 as SEQ ID NO: 2 homodimers. However, the broad scope of claims still read on some derivatives thereof having extension, substitution, insertion and/or deletion of the amino acid sequence of SEQ ID NO: 2. Therefore, the claimed invention is rejected by the cited reference because the peptide disclosed by Reyes et al. are considered as a derivatives of the SEQ ID NO: 2 as claim 34 and its dependent claims drafted. The rejection is maintained.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 34-37, 45, and 47-49 are still rejected under 35 U.S.C. 102(b) on the same ground as stated in the previous Office Action, as being anticipated by Reyes et al. (B) (US patent No. 5,741, 490A) or Reyes et al. (C) (US Patent NO. 5,770,689).

14. In response to the previous office action, Applicants substitute old claim 1 with new claim 34 by adding one limitation of the isolated peptide consisting of pE2 homodimers and immunological reaction to the pE2 homodimers. Therefore, the cited reference does not teach or

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obvious to the unique characteristic of the isolated pE2 as SEQ ID NO: 2 homodimers. However, the broad scope of claim still read on some derivatives thereof having extension, substitution, insertion and/or deletion of the amino acid sequence of SEQ ID NO: 2. Therefore, the claimed invention is rejected by the cited reference because the peptide disclosed by Reyes et al. are considered as a derivatives of the SEQ ID NO: 2 as claim 34 and its dependent claims drafted. The rejection is maintained.

Claim Rejections - 35 USC § 102

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

16. Claims 34, 37, 64 are rejected under 35 U.S.C. 102(b) on the same ground as stated in the previous office action as being anticipated by Khudyakov et al. (Virol. 1994, pp. 390-393).

17. In response to the previous office action, Applicants substitute old claim 1 with new claim 34 by adding one limitation of the isolated peptide consisting of pE2 homodimers and immunological reaction to the pE2 homodimers. Therefore, the cited reference does not teach or obvious to the unique characteristic of the isolated pE2 as SEQ ID NO: 2 homodimers. However, the broad scope of claim still read on some derivatives thereof having extension, substitution, insertion and/or deletion of the amino acid sequence of SEQ ID NO: 2. Therefore, the claimed invention is rejected by the cited reference because the peptide disclosed by Reyes et al. are considered as a derivatives of the SEQ ID NO: 2 as claim 34 and its dependent claims drafted. The rejection is maintained.

Claim Rejections - 35 USC § 102

18. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

19. Claims 34-37, 45-49, 54-57 and 64-66 are still rejected under 35 U.S.C. 102(e) on the same ground as stated in the previous Office action as being anticipated by Li et al. (US Patent No. 6,514,690B1).

20. In response to the previous office action, Applicants substitute old claim 1 with new claim 34 by adding one limitation of the isolated peptide consisting of pE2 homodimers and immunological reaction to the pE2 homodimers. Therefore, the cited reference does not teach or obvious to the unique characteristic of the isolated pE2 as SEQ ID NO: 2 homodimers. However, the broad scope of claim still read on some derivatives thereof having extension, substitution, insertion and/or deletion of the amino acid sequence of SEQ ID NO: 2. Therefore, the claimed invention is rejected by the cited reference because the peptide disclosed by Reyes et al. are considered as a derivatives of the SEQ ID NO: 2 as claim 34 and its dependent claims drafted. The rejection is maintained.

21. Regarding to the claim 60, applicants assert that it has same limitation of claims 24 and 25 and 22. Therefore, it could be in condition for allowance. Applicants' assertion is not correct because claim 60 has different scope then claims 24-25 because it read on not only the pE2 peptide homodimers but also its derivatives. Therefore, it cannot be in condition for allowance.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bao Qun Li whose telephone number is 571-272-0904. The examiner can normally be reached on 7:00 am to 3:00 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Housel can be reached on 571-272-0902. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bao Qun Li

11/23/2005


JAMES HOWELL 11/28/05
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1633